

Changes to Design Factors
2005 Subdivision Street Requirements

Design Guide for Subdivision Streets	compared to 1996 SSR	compared to Residential Streets (RS)
Design Requirements		
A. Projected Traffic /Capacity Analysis	No change	Recommends usage of ITE trip generation, consistent with design guide.
B. Functional Classification	VDOT will concur with functional class instead of determining functional class. This more closely reflects what is happening in most of the state.	RS states that most subdivision streets are local streets - consistent with the design guide.
C. Terrain	Terrain is no longer a primary factor in street design. Design standards reflect rolling terrain with allowances for mountainous areas.	RS states that residential streets should conform with surrounding terrain . This is consistent with the design guide.
Roadway Geometric Design Criteria		
A. Collector and Arterial Roadways	No change	n/a
B. Local Roadways	No change	n/a
C. Transitions and turn lanes	No change	does not address
D. Sight Distance	Changes in object height as noted in current AASHTO - less restrictive. Clarifies where sight distances should be measured. Sight distance requirements have been lengthened based on revised AASHTO'S requirements.	Object height is not noted. Stopping and intersecting sight distances are less in RS than in the design guide. Stopping 115 vs. 125. Intersecting is 125 vs. 200 for <400
Elements of Typical Section		
A. Pavement Design	No change	Does not address specifics of pavement design. Notes types of pavements. Suggests that for flexible pavements, the base course is put in place for subdivision construction but that the surface course not be put down until homes are ready for occupancy.
B -1. Pavement Width - Curb and Gutter	Increased minimum width for roads carrying 2000-4000 vpd from 38' to 40' based on VDOT road design manual and AASHTO. Decreased minimum width for roads carrying less than 400 VPD based on AASHTO'S guidelines for very low volume roads.	Suggests 22-24' pavement for lower volume roads and 24 - 26' for most local streets. Roads carrying more than 1500 vpd are considered collectors and should have 36' of pavement
B -2. Pavement Width - Shoulder & Ditch	Increased minimum width for roads carrying 2000-4000 vpd from 22' to 24' based on VDOT road design manual and AASHTO. Decreased minimum width for roads carrying 401 - 1500 from 22' to 20' based on VDOT road design manual and AASHTO. Decreased minimum width for roads carrying less than 400 VPD based on AASHTO'S guidelines for very low volume roads.	Suggests 8' shoulders regardless of pavement width. Very general comments discouraging shoudler and ditch sections because of high cost of properly maintaining shoulders.
B -3. Pavement Width -One Way Street	New section - acknowledges that some subdivision design may include grids of one way streets and provides design guidance for those streets.	Notes that neotraditional subdivisions may contain one way streets but does not provide design guidance
C. Parking Lane Widths (Curb and gutter)	Changes in parking lane width as noted in current AASHTO - less restrictive.	Only notes that on street parking should be considered on local roads.
D. Intersections	Defines a suggested minimum distance between intersections to provide consistency across the state.	Suggests the same intersection distances for low volume streets.
E. Concentric Design	No change	n/a

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F. Cul de sacs and turnarounds	No change	Suggests the same minimum cul de sac radii.
G. Curb and Gutter designs	Now requires entrance with roll top curb to address previously identified issues.	Does not address entrance with roll top but states that straight edge C&G is preferable in most situations.
H. Private Entrances	No change	n/a
I. Pedestrian and Bicycle Facilities	Includes sidewalks - no changes - under SSR VDOT will now accept all sidewalks constructed in accordance with appropriate standards.	Consistent recommendations with design guide
J. Bridge and culvert design criteria	no change	n/a
K. Roadway Drainage	no change	Allows spread 1/2 the width of the roadway. Does not address frequency or intensity of storms for drainage evaluation.
L. Right of way	requires right of way to extend 3' beyond VDOT maintained item. This provides maintenance crews sufficient room to repair/replace item	Suggests right of way 1 foot beyond publicly maintained item.
Other Design Considerations		
A. Clear Zone	Clear zone was not defined in previous SSR. Clear zone requirements here reflect urban local street requirements as noted in VDOT's clear zone guidelines.	n/a
B. Guardrail	No change	n/a
C. Traffic Control	No change	recommends MUTCD, consistent with design guide.
D. Streetscape	Provides guidance for placement of trees within the right of way. Trees have always been allowed, this guidance will standardize placement.	Consistent recommendations with design guide
E. Landscape considerations	New section, provides a list of trees that have been successfully used in Virginia. This list is provided at the request of both developers and VDOT engineers as a general guide for the types of trees that can be successful in street design. Emphasizes the need for proposed plantings to be provided by certified arborists or landscapers.	Consistent recommendations with design guide
F. Traffic Calming	New section, specifies traffic calming features that can be included in initial design rather than retrofit at VDOT's expense later.	Consistent recommendations with design guide
G. Utilities	No change	Consistent recommendations with design guide
H. Roadway Lighting	No change	Consistent recommendations with design guide
Neotraditional Neighborhood Design	New section, allows certain neotraditional features to be included in subdivisions	Acknowledges neotraditional design as an appropriate subdivision design.
Innovative Design Proposals	New section, allows counties to propose features they would like to see in their subdivisions as a part of a countywide plan.	n/a